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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,165	07/24/2003	Christopher Cave	I-2-0369.1US	9718

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EXAMINER	
LAM, DUNG LE	
ART UNIT	**PAPER NUMBER**
2617	
MAIL DATE	**DELIVERY MODE**
09/18/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/626,165	CAVE ET AL.	
	Examiner	Art Unit	
	DUNG LAM	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 June 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *57-88* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *57-88* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ___.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims **57-62, 64-69, 71-84, 86-88** rejected under 35 U.S.C. 103(a) as being unpatentable Jollota et al. (US 2004/0142691, hereinafter **Jollota**) in view of **Crichton** (US Patent No. 6330459).

Regarding **claim 71, Jollota** teaches a base station comprising:

- the base station configured to detect omnidirectional sounding pulses from wireless transmit/receive units (WTRUs) (BSU detects a Bluetooth inquiry [0024]);
- the base station configured to communicate information related to a detected omnidirectional sounding pulse from a WTRU to an interface (BSU sends received data structure to PSC [0024]);
- the base station configured to receive from the interface a notification to establish a wireless communication with the WTRU (PSC sends connection command to optimal BSU [0025-0026]); and

- the base station configured to begin a wireless communication with the WTRU in response to a notification to establish a wireless communication with the WTRU ([0025-0026]).

However, **Jollota** does not explicitly teach the base station configured to receive from the interface a relative location of the WTRU and selectively operating the beamforming antenna to direct a common channel toward the relative location of the WTRU.

In an analogous art, **Crichton** selectively operating the beamforming antenna (Fig. 3 and 4, Abstract) and the base station configured to receive from the interface a relative location of the WTRU and selectively operating the beamforming antenna to direct a common channel toward the relative location of the WTRU (BS receives from interface "OMC" to respond with narrow beam toward the direction of the communicating unit, C5 L55- C6 L5, C6 L25-55, C8 L40-60). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine Jollota's teaching of establishing a handover communication with Crichton's teaching of using a beamforming antenna to direct the common channel toward the location of the MS to minimize interference (Crichton C6 L9).

Regarding **claims 57, 64, 76 and 82** they are methods and apparatus claims that have the same corresponding limitations as claim and thus are rejected for the same reasons as claim 71.

Regarding **claims 58, 65, 72 and 77**, **Jollota and Crichton** teach the method of claim 57 wherein the communicated information related to the detected omnidirectional

sounding pulse includes information to facilitate determining the relative location of the WTRU ([0006]).

Regarding **claim 59, 66, 73, 78, and 83, Jollota and Crichton** teach the method of claim 58 wherein the communicated information related to the detected omnidirectional sounding pulse includes signal strength information ([24, 29], RSSI of received MU request), where the signal strength information indicates that the received signal strength crossed a threshold.

Regarding **claim 60, 67, 74, 79, and 84, Jollota and Crichton** teach the method of claim 57 wherein the communicated information related to the detected omnidirectional sounding pulse includes geolocation information (C5 L55- C6 L5, C6 L25-55, C8 L40-60).

Regarding **claim 61, 68, 75 and 80, Jollota and Crichton** teach the method of claim 57 further comprising transmitting a cyclic sweeping beacon channel (C5 L55- C6 L5, C6 L25-55, C8 L40-60).

Regarding **claim 62, 69 and 81, Jollota and Crichton** teach the method of claim 57 wherein detecting the omnidirectional sounding pulse includes detecting at least one of a plurality of omnidirectional sounding pulses ([0024-0026]).

Regarding **claim 86, Jollota and Crichton** teach the WTRU of claim 82 except wherein the antenna is an isotropic antenna configured to transmit equally in all directions. However, the examiner takes official notice that the use of isotropic antenna is well known in the art. Therefore it would have been obvious for one of ordinary skill in

the art at the time of the invention to combine Jollota and Crichton's teaching with the isotropic antenna to communicate signals from all directions.

Regarding **claim 87**, **Jollota and Crichton** teach the WTRU of claim 82 wherein the antenna is a selectively operable beamforming antenna configured to transmit directional beams and omnidirection sounding pulses comprising a plurality of directional sounding pulses (C5 L55- C6 L5, C6 L25-55, C8 L40-60).

Claim **85** rejected under 35 U.S.C. 103(a) as being unpatentable by **Jollota and Crichton** in view of **Velazquez et al. (US Patent No. 6,593,880).**

Regarding **claim 85**, **Jollota and Crichton** teach the WTRU of claim 82 but is silent that the mobile unit is equipped with a global positioning system (GPS) and the transmitting of an omnidirectional sounding pulse includes transmitting of mobile unit location information associated with the sounding pulse transmitted by the mobile unit and/or includes transmitting of identification information associated with the sounding pulse transmitted the mobile unit. In an analogous art, **Velazquez** teaches that the UE has a GPS (C8 L20-37). Therefore it would have been obvious for one of ordinary skill in the art at the time of the invention for to add Valazquez's GPS to Watanabe and Jollota's handoff method to speed up the location positioning of the handset and thus to promote a faster handoff process.

Claims 63, 70 and 88 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jollota and Crichton** in view of **Anderson et al.** (US Patent No. 5396541).

Regarding **claim 63 and 70**, **Jollota and Crichton** teach the method of claim 62 wherein the plurality of omnidirectional sounding pulses includes a first pulse having a first signal strength and a second pulse having a second signal strength, where the second signal strength is greater than the first signal strength. However, Anderson teaches a method of adjusting the power to a higher or lower level if the mobile is far or close from the base stations respectively (Col. 9, lines 50-15). In addition, it is also well known in the field of communications that after a failed transmission, one of ordinary skill in the art may use back-off algorithm to resend the signal in a predefined period of time. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine **Jollota and Crichton**'s handoff method and **Anderson**'s teaching of a increasing the signal power (if the mobile is far away from the base station) at a predefined period to increase the chance of a successful handoff.

Regarding **claim 88**, **Jollota and Crichton** teach the WTRU of claim 82 except the antenna is configured to transmit a series of omnidirectional sounding pulses to establish a new wireless. . However, Anderson teaches a method of adjusting the power to a higher or lower level if the mobile is far or close from the base stations respectively (Col. 9, lines 50-15). In addition, it is also well known in the field of communications that after a failed transmission, one of ordinary skill in the art may use back-off algorithm to resend the signal in a predefined period of time. Therefore, it

would have been obvious for one of ordinary skill in the art at the time of the invention to combine Watanabe and Jollota's handoff method and Anderson's teaching of a increasing the signal power (if the mobile is far away from the base station) at a predefined period to increase the chance of a successful handoff.

Response to Arguments

Applicant's arguments filed 6/18/09 have been fully considered but they are not persuasive.

Applicant argues that the Bluetooth inquiry is not equivalent to an omni-directional sounding pulse because its process is relatively slow.

The examiner respectfully disagrees. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., how fast the process is) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). How fast the process is irrelevant because the omidirectional sounding pulse in the claim does not indicate/require/define any particular speed associated with it.

Applicant argues the Bluetooth inquiry packet does not provide any relative location thus it can not be equivalent to the omnidirectional sounding pulse.

The examiner respectfully disagrees. The claim does not require the "omnidirectional sounding pulse" to provide a relative location. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "omnidirectional sounding pulse" provides relative location) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In fact, the claim only requires that that a relative location is received from an interface. The claim also does not specifically define what constitutes an interface. Applicant admits in the Remarks that Crichton teaches "Crichton teaches that the direction of the communication device is determined by the base station based on the direction of arrival of the signal at the antenna of the base station, (column 5, line 55 - column 6, line 5)."

This teaching clearly is equivalent to the alleged missing limitation because a relative location being received (direction of arrival of the signal) is being received from an interface (such as an antenna of the base station).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DUNG LAM whose telephone number is (571) 272-6497. The examiner can normally be reached on M - F 9 - 5:30 pm, Every Other Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Harper can be reached on (571) 272-7605. The fax phone number for the organization where this application or proceeding is assigned is (571) 272-6497.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/VINCENT P. HARPER/

Supervisory Patent Examiner, Art Unit 2617